THE FARM INDEX

U.S. Department of Agriculture/February 1971

Agriculture Outlook

Pig news. Pork-a-plenty is the prospect for months ahead . . . at least into summer.

The USDA Hogs and Pigs Report of December 23 says that slaughter supplies this winter and spring will continue well above the year-ago level. After that, however, slaughter rates will probably taper off and by fall be below those in the comparable period last year.

The number of sows farrowing in the 1970 fall farrowing season (June-November) was up 18 percent.

But hog producers plan to slacken present output. They calculate to have only 1 percent more sows farrow during December 1970-May 1971 than a year earlier. All this increase will come early in the spring farrowing period.

As for the present hog picture, just about everything . . . except prices . . . is slanted upward. Here are the vital statistics estimated as of December 1.

- Number on U.S. farms: 67.5 million—19 percent more than a year ago.
- Earmarked for market: 58.1 million—22 percent more than a year earlier. By weight, they size up like this.

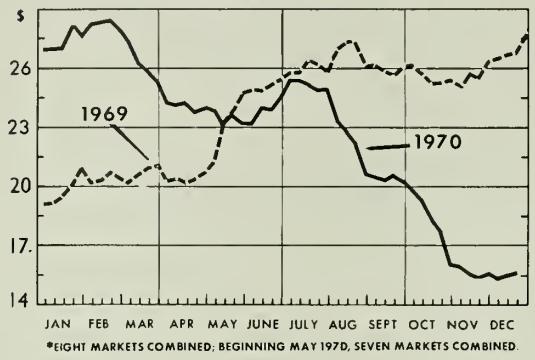
Weight group	*1969*	*1970*	*Change*
Pounds	*1,000 head*		*%*
Under 60 ..	17,486	21,603	+24
60-119	12,988	15,681	+21
120-179	9,609	11,449	+19
180-219	5,758	6,973	+21
220 and up .	1,876	2,416	+29
Total ..	47,717	58,122	+22

- Holdbacks for breeding: About 9.4 million—an increase of 5 percent.
- Pig crop for year ending November 1970: 102.3 million—15 percent above the year-earlier crop.
- Farrowings in offing: 7.2 million between December 1970 and May 1971—only about 50,000 more than the comparable 1969/70 period.

The price picture. As 1970 drew to a close, prices of barrows and gilts at 7 major markets were averaging close to $16 per hundredweight—down $9 from the summer high and $10 below late December of '69.

Any price changes this winter will probably be small; the seasonal spring advance will also be limited. Hog prices in first half 1971 will thus average considerably below levels through June of last year. The sharp ups-and-downs of prices during the past 2 years are charted here.

AVERAGE PRICE BARROWS AND GILTS*



*EIGHT MARKETS COMBINED; BEGINNING MAY 1970, SEVEN MARKETS COMBINED.

Who hogs production? Iowa and Illinois lead in hog and pig numbers, with 24 percent and 11 percent of the U.S. inventory on December 1. Their holdings were up 17 percent and 14 percent, respectively, from a year earlier.

Altogether, numbers in the 10 Corn Belt States rose an even sharper 18 percent to 50.4 million—75 percent of the national total. All other regions, too, showed some increase last year.

And, incidentally . . . on the Chinese calendar, the new year beginning January 27 is the Year of the Hog.

What's with wheat? The 1971 prospective winter wheat crop is 1,040 million bushels, judging by conditions as of December 1.

This would be 7 percent less than the 1970 crop, 9 percent less than in 1969, and the smallest crop since 1965.

Fall seedings of winter wheat for harvest in '71 totaled 38.1 million acres . . . 1 percent under 1970 crop acreage, 12 percent less than 1969's, and the smallest acreage since 1957 crop plantings.

Meanwhile, the 1970/71 supply of hard winter wheat stands at 1.4 billion bushels—most since 1963/64. Total wheat supplies, at about 2.24 billion bushels, are off slightly from 2.28 billion a year earlier.

Cut in carryover. With sharp gains in exports and feed use, we will probably need 1.5 to 1.6 billion bushels of wheat to meet 1970/71 demand. Carryover on June 30, 1971, is expected to fall to a relatively low 685 million bushels—200 million less than 1970 carryover.

Export comeback. International wheat trade rose to nearly 2 billion bushels in 1969/70 after slumping to a recent-years' low of 1.7 billion in 1968/69.

U.S. wheat shipments abroad in 1970/71 are expected to hit 725-750 million bushels, topping last season's 606 million.

Wheat-for-feed trend. Livestock may consume 235 million bushels or more of wheat as feed in the current year ending June 30. The high level would rival that 25 years ago during World War II. Main reason wheat has become so attractive as feed is the extremely competitive price relationship of wheat and corn that has developed and is likely to continue.

	1969		1970	
Month	Wheat	Corn	Wheat	Corn
	Dollars per cwt.			
June	2.03	2.11	2.05	2.16
July	1.92	2.11	2.05	2.21
Aug.	1.98	2.11	2.18	2.27
Sept. ...	2.07	2.05	2.35	2.46
Oct.	2.13	2.00	2.38	2.39
Nov. ...	2.15	1.91	2.42	2.30
Dec.	2.17	1.95	2.35	2.43

The rye rebound. In spite of uncooperative weather, U.S. farmers seeded 4.9 million acres of rye last fall . . . 12 percent more than '69 plantings, 19 percent above '68, and the most since the fall of '61. First forecast of upcoming harvest comes in July.

Reminder: National Agricultural Outlook Conference is still set for February 23-26 in Washington, D.C. Commodity situations and outlook will get detailed attention on February 24, says the preliminary program.

Foreign spotlight. *Poland.* Riots that scarred several Polish cities in December were partly attributed to price hikes for food and fuel. Average meat prices rose 17.6 percent. Price tags on milk and fish were up 8 and 11.7 percent, respectively. Lard costs jumped a third; flour and semolina, about a fifth.

The last 2 Polish crop years weren't good. Poor grain and potato harvests reduced feed supplies, and livestock numbers declined.

Brazil. The 1971 coffee crop is forecast at 23 million bags—a 4-year high—but still shy of the 27-million bag domestic and foreign requirement. Poor harvests in 1968 and 1969 were topped by the disastrous 1969 freeze in Parana, the largest producing state, and the 1970 harvest was the smallest since World War II.

Brazil has had large coffee stocks to fall back on in poor crop years. But stocks have now dwindled to where demands couldn't be met in the event of another crop disaster.

Australia. Under a US $28 million contract, Australia is exporting 50,800 metric tons of beef and mutton to the USSR. Shipments, which began in December, will continue through August 1971.

East Pakistan. Milled rice output for 1970/71 is estimated at 11.3 million metric tons, down roughly 7 percent from the level anticipated before November's cyclone and tidal waves. The onslaught came just before the aman harvest season—late November through January. Aman (winter-harvested) crops usually comprise over 60 percent of East Pakistan's total rice production.

Philippines. Three major typhoons in October-November, including Manila's worst in 100 years, curtailed expected gains in output of rice, coconuts, and abaca (Manila hemp). Damage to the 1970/71 rice crop is put at 400,000 metric tons. Also hard hit were bananas and vegetables for domestic use. Other major crops—sugar, corn, tobacco, and pineapples—sustained little or no harm. Estimated total damage is $42 million.

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Agriculture In The Computer Complex

Some years ago, the story goes, a well-known quotation was translated by computer into Russian and then back into English.

The words fed into the machine were: "The spirit indeed is willing, but the flesh is weak." What came out from the double translation was: "The liquor is good, but the meat is spoiled."

Scientists may well say that in this case someone pushed their electronic brain child a bit too far. Nevertheless, the tale points up the fact that a computer is still only a mechanical puppet.

The computer relies on man to pack its brain cells with knowledge, then to tell it how to make the knowledge useful and precisely how to go about it. Unless it is thoroughly indoctrinated, it can't add 2 and 2.

Properly "educated," however, a computer is the speediest and most efficient "white collar" worker that man has ever been able to hire for many jobs—especially ones of great magnitude and complexity.

Moreover, the computer is a demon for accuracy. The human statistical clerk or mathematician may stop to think about a personal problem, make an error or two a month —or even more. But the data processing industry says that a computer will make no more than one error in 4 years because of physical malfunctioning.

How badly an enterprise needs or wants such a reliable worker, and how much it is willing to pay, depends largely on the nature of the business involved and the size and intricacies of its operations.

Agriculture—especially at the grass roots level—has not been as quick as many other businesses to court the computer. There are several logical reasons:

—Most of our Nation's farmers are still relatively small proprietors compared with industry's corporate giants.

—Farmers' physical holdings are generally in one bundle in one place —not scattered throughout the country as is the case with a "nationalized" retailing firm or a bus company with hundreds of terminals.

—While the operations of a given farm are usually in a limited geographic area and involve a limited number of commodities, the farm is a very complex enterprise—more so than many firms in industry.

—The crops and livestock that connote agriculture are many in number. In all, there are about 150 farm commodities. Several of these are customarily produced by one farm operator. And many more stand as alternatives that could be produced at any one time, depending on resources available and price relationships.

—Agricultural data often tend to be more variable and intangible than other business data. Weather, plant mutations, changing land contours, soil composition—all are factors in agriculture that do not lend themselves to computerization as easily as bank accounts or automobile inventories.

Unfortunately, the complexities of individual farms—combined with the costs of computerized analysis—have tended to limit the average farmer's use of computers in making production and marketing decisions.

Computerized analysis is used on only a fraction of U.S. farms, mostly the larger ones. And then it is most often used for specialized analysis—such as minimizing the costs of rations at a feedlot.

Yet the computer is emerging as a valuable tool in the field of farm management: farm recordkeeping, analysis of farm record data, and decision making or forward planning by both government and farmers.

At the farm level, computer services now available run a wide gamut.

They prepare a farmer's income tax. They trace his stolen truck. They make rapid searches of water-right statutes. They "case" the hired farm labor market.

They speed up the transmission of the latest farm prices and other market news. They rapidly estimate the potential loss from disease in a dairy herd. They figure out how production resources can be put to the most profitable use.

The individual farm or ranch (with such rare exceptions as the huge King ranch in Texas) cannot afford to set up its own electronic data processing (EDP) center. Nor would the scope of its operations justify it.

But in most parts of the country, individual farmers and ranchers now have access to EDP facilities that may help them solve a variety of production, marketing, and financing problems.

Some of these problems now solved by the computer might otherwise take a vast staff of economists and mathematicians, a battery of desk calculators, and a number of years to answer. (Computers can now process an instruction in 54 billionths of a second—the time it takes light to move 53 feet.)

From the down-on-the-farm point of view, the most helpful development of the computer age was the advent of "time sharing".

Time sharing computer systems, which came of age in 1965, provide users with typewriters that serve as communications links with the central computer.

As many as 50 users may have terminals tied in with a central computer. Telephone lines serve as connections for sending commands to the computer and getting answers.

Time sharing gives the user access to large-capacity computers, including libraries of programs to handle various kinds of jobs. At the same time, the subscriber has control over the scheduling and running of jobs. The results of computer runs may be produced "on the spot" for immediate use.

Through the use of the time sharing device, data processing services available to individuals have proliferated.

Many State universities, through their Extension Services, are working directly with farmers in testing uses of the new technology.

There are also many "vendors" of data processing services—at varying fees. Among them:

- The American Farm Bureau and State Farm Bureaus.
- Banks. Information about these plans is obtainable from the Farm Credit Association and the agricultural Committee of the American Bankers Association.
- Trade associations (such as the Dairy Herd Improvement Association).
- Agribusiness (commercial feed, fertilizer, equipment, and farm insurance companies among them).
- Commercial data processing firms.

In addition, the U.S. Department of Agriculture—including its Economic Research Service—has field representatives who cooperate at the State and local level in research that uses data processing methods. (*1*)

WDPC and ERS

A computer center that tracks the progress, problems, and potentials of American agriculture?

Yes, it exists. It is the Washington Data Processing Center (WDPC), a unique computer facility, housed beneath USDA's South Building in Washington, D.C.

Its giant Model 360 computers forecast crops, map forests, simulate watersheds, evaluate sealed bids, balance the USDA budget, and help in nearly every other phase of the Department's work. Many of its computations directly or indirectly help the farmer.

Though USDA agencies have over 3 dozen computers, the WDPC is the only facility offering service Department-wide. Administered by the Statistical Reporting Service, it is also the only Federal computing service that pays for itself.

Computer industry officials believe that the USDA's Model 360's are the world's most heavily used. Business has doubled since the Center opened in 1963.

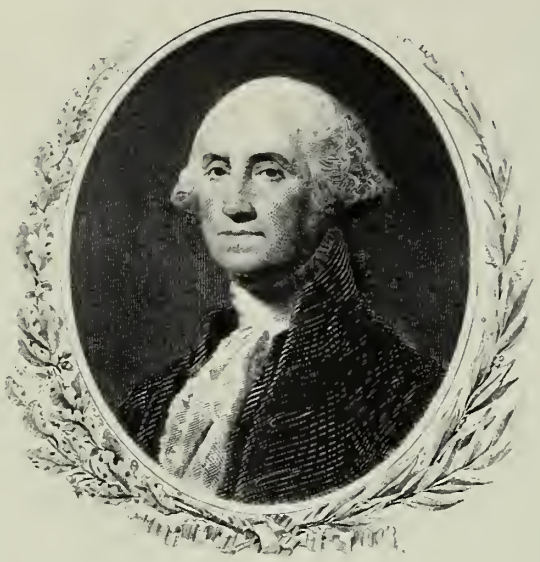
The Economic Research Service is one of its biggest users. About half of the statistical studies for which ERS is responsible have now been computerized. Many are massive jobs.

Among them is the computation of U.S. farm income, both nationwide and State-by-State. On a broader scale, the effect of changing production, marketing trends, prices, and costs on farmers' incomes is measured.

Another massive task—going beyond mere statistics—is the development of a computer program for water resources planning. A joint endeavor by ERS and other government agencies, it projects likely patterns of agricultural production and related measures of economic activity for the years 1980, 2000, and 2020.

Still another herculean ERS job has been that of setting up a "national model" for agriculture. It is now in effective use to estimate year-to-year changes in the production of major farm crops.

An ERS feed-livestock computer program is also a big project. Kept up annually, it generates and analyzes feed grain price and production changes and other variables useful in formulating national programs. (*2*)



GEORGE WASHINGTON

Men and Milestones

"Monday, 14, Fine Warm day, Wind So'ly and clear till the Even'g when it clouded; no Fish were to be catchd to day neither."

So began the entry in George Washington's diary for the 14th of April 1760. This day Mr. Washington was preoccupied with one of his earliest experiments in using natural fertilizers.

In 10 different combinations, he mixed plain soil, sand, and mud from the creek with the manure of three classes of livestock . . . and in 10 plots sowed "three grains of Wheat, 3 of Oats, and as many of Barley—all at equal distances in Rows, and of equal depth (done by machine for the purpose)."

At one time or another Washington's vast agricultural empire encompassed nearly 70,000 acres in 37 locations, plus 24 city lots and an entire city square. His biggest holding was Mount Vernon. It had over 8,000 acres, divided into five farms, including a fishery, a ferry, and two grist mills.

Washington envisioned U.S. agriculture as one day extending far beyond the Alleghenies; so that farmers could get their products to market, he promoted the development of transportation facilities between the Potomac River and the Ohio. And by his own example, he set the pace for the technological progress that was to envelop our Nation's agriculture.

In the early 1760's Washington raised much tobacco, as did other Tidewater farmers. But by the late 18th Century, he grew virtually none, believing that continuous cropping of a single crop would exhaust the soil. He developed, instead, a fine strain of wheat through careful seed selection. He also pioneered in growing alfalfa as a feed and cover crop to conserve the soil.

While his neighbors got a wool yield of 2 pounds to the fleece, Washington got over 5 pounds. By his own account he was the first American to raise mules.

"I know of no pursuit," he wrote in 1794, "in which more real & important service can be rendered to any Country than by improving its agriculture. . . ." (*3*)

Seasonal Help Not as High Paid as Regular Worker

The number of hired workers doing farmwork in 1969 was less than half the number in 1940. And expenditures for hired farm labor now constitute only about 8 percent of farmers' total operating expenses.

These figures evidence the increasing substitution of labor-saving machines and other capital inputs for hired workers during the last 3 decades.

With this substitution, however, the importance of hired labor has actually been enhanced, because the greater use of expensive equipment adds weight to the efficient and timely use of all resources—labor included.

For all farms hiring labor in 1966, an average of 0.3 regular workers and 6.5 seasonal workers were employed per farm. The smallest number of regular workers was hired on tobacco farms; the largest number on poultry farms.

Labor intensive crop farms—vegetable, fruit and nut, other field crops, cotton, and tobacco—were the major users of seasonal labor. The use of both seasonal and regular hired labor increased considerably on larger farms.

Regular hired workers averaged 2,268 hours in 1966. Those employed on the larger farms worked more hours than those on smaller farms. Seasonal workers averaged 57 hours of work per farm. This did not differ much between animal and crop farms but more workers were used on crop farms.

The average hourly wage (including perquisites) of regular workers was appreciably higher than that of seasonal workers; $1.44 per hour compared with $1.13 per hour. However, much more of the regular than seasonal worker's wage is comprised of noncash perquisites—such as housing, transportation, and comparable "bonuses."

By type of farm, the wage bill on vegetable farms was highest and on tobacco farms was lowest. (*12*)

CAMPAIGN SALES FOR FARM PRODUCTS

Agricultural groups seek stronger retail support in market promotion

An increasing number of agricultural producers have formed groups to promote sales of their products. By 1970, there were around 1,200 of these organizations with total expenditures ranging from $110 million to $120 million.

Through their organized efforts, commodity groups stimulate consumer interest in their products by media advertising and other forms of publicity.

However, for maximum effectiveness, support and participation of retailers and wholesalers is necessary. Present day food stores are self-service and offer from 6,000 to 7,000 items. Thus, it is not only necessary to capture consumer interest through media advertising and publicity, but also to present the product in eye-catching displays in retail outlets.

Compared with other groups, particularly brand name sponsors, agricultural organizations have limited budgets. This may preclude the intensive market research it takes to develop commodity promotions that have the strongest impact on retailers and consumers alike.

For this kind of "intelligence", commodity organizations frequently turn to government agencies for assistance.

In response, the ERS recently conducted personal interviews with managers of 100 food retailing firms across the country.

In the year prior to the survey, the respondents said they received an average of 38 offers to participate in campaign promotions for agricultural products. Retailers actively supported close to two-thirds of the campaigns.

Participation varied by location, however, averaging close to four-fifths in the West to less than half in the Northeast.

Limited trade support from Northeast markets was largely a result of prohibitive transportation costs from major producing areas, coupled with a lack of pressure from local agricultural groups.

The merchants supported the campaigns in varying degrees. Some products received full backing—special displays and prominent places in media advertising. But some products were merely placed on grocery shelves with relatively simple display materials.

In general, the respondents said they favored commodity promotions over brand promotions (they participated in close to 40 percent of the latter offers). The retailers felt they were allowed greater flexibility with commodity campaigns, which featured fewer bookkeeping and inventory problems usually associated with brand name promotions.

With an eye to helping agricultural groups develop even more effective campaigns in the future, interviewers asked the merchants what campaign features would encourage their participation.

Techniques offering greater inducement in securing dealer participation included joint advertising of complementary products and dealer incentives (cooperative advertising, advertising allowances, and dealer contests).

About 75 percent of the respondents said they would be favorably inclined toward joint promotions—two or more groups combining forces to sponsor one or more product.

Three variations of joint campaigns were considered: (1) commodity groups and brand groups sponsoring the same product, (2) commodity organizations and brand advertisers sponsoring complementary or related products, and (3) several different agricultural groups promoting a variety of complementary products.

Joint campaigns were cited as having greater impact. And, as costs are shared, the expenses to each group are less.

In general, the retailers favored joint campaigns that offer complementary products over those promoting a single item. Respondents felt that complementary products help sell each other. This is particularly useful if one product carries less of a demand than its complement.

Offering related products often gives promoters a chance to develop informative displays that offer menu suggestions to shoppers. This can be especially effective if a brand advertiser joins in. For example, asparagus growers might join forces with a brand group offering a packaged hollandaise sauce.

Retailers also said that brand names help sell agricultural products, as shoppers associate a certain degree of quality with a familiar brand, and would be more favorably disposed to its complement.

Advertising allowances are commonly offered to entice retail support for promotion campaigns. The amount is usually determined on a per case basis, or by a cooperative agreement in which the advertiser pays for all or part of the merchant's media advertising.

Per case allowances (a specified amount for each case purchased) aren't always suitable for agricultural products. And most merchants favored the alternative method. In the year prior to the survey, over 80 percent of the respondents partici-

pated in campaigns offering advertising funds through a cooperative agreement.

Many agricultural organizations invite the dealers themselves to participate in some kind of contest. The contests are usually based on sales, display appearance, or a combination of both.

The retailers liked display contests, as they are easy to administer. On the other hand, sales contests were appealing to both merchants and promotion sponsors.

Respondents pointed out, however, that inequities occur in each kind of contest, with one store having the edge on another. They indicated they would prefer contests featuring the best qualities of each type.

Consumer incentives are seldom used by agricultural groups, and many retailers said they resisted promotions that featured them. However, most respondents recognized that consumer incentives stimulate sales, and have come to accept them.

The retailers were asked to rank, in order of importance, the consumer incentives they felt were most effective in spurring sales.

Coupons redeemable at checkout counters were the overwhelming winners. "Cents-off" deals were ranked second in effectiveness.

Agricultural organizations spent an estimated $10 million last year for point-of-purchase (POP) materials. Some groups have expressed concern that their POP materials aren't being used.

Many respondents said they refused some display materials because they were inappropriate for the size or decor of their stores. It was suggested that commodity sponsors furnish store management with catalogs that offer a reasonable selection of available POP materials.

One merchant thought it advisable for agricultural promoters to consult retailers when planning display materials. This could be beneficial for each group: store management would get the displays it wants, and would probably be more willing to participate in promotions. (*13*)

Cattle and The Hedging Quandary

A cattle feeder who hedges on the futures market isn't looking for windfall profits. He's usually "selling short" . . . protecting himself against a possible drop in the cash price of fed cattle during the feeding period.

Should the price go in the other direction, the hedger stands to make less money than had he stayed out of the futures market.

When is hedging advisable?

Aside from his production costs—and the general outlook for prices—a would-be hedger needs to consider the difference between cash prices in the local market and those at the delivery point specified in the futures contract.

The hedging operation begins with the producer's entering into a contract to sell (deliver) cattle at one of several delivery points at some future date. But actual delivery is usually not economically feasible or even anticipated by most producers. So they generally sell the cattle locally (in the cash market); then they enter into a futures contract to buy cattle. This offsets the earlier contract—thus completing the hedging operation.

The problem is, the local cash price is not the same as the futures price on the Chicago Mercantile Exchange. Thus, it's difficult to predict the net result of the hedge.

As explained by economists at the University of Arizona, the ideal hedge is when a potential gain from one venture (such as selling and buying futures) exactly cancels out a potential loss from another venture (the sale of fed cattle).

For this to happen, the cash and futures price changes must offset each other by the end of the hedging period.

Futures and cash prices tend to converge as futures contracts mature —due to the possibility of actual delivery of live animals under future contracts. If futures prices do not adjust to the cash price at the par delivery point (now Chicago) at the closing of a futures contract, holders of contracts to deliver will actually deliver live animals. The price at the "par delivery point," after certain adjustments for distance factors, becomes the settlement price at the other delivery points.

In individual markets such as Phoenix, however, cash prices move with the supply/demand situation in local cattle markets. So when the hedger buys back the contract, the cash price may fall slightly above or below the Chicago futures price.

Sometimes the hedger's net profit is more than he anticipated. Other times the profit is less. Either way, the result of the hedging operation is hard to prefigure. And for this reason many cattle feeders don't use the Chicago Mercantile Exchange to protect against losses in the cash market. The complexities and costs of futures transactions also discourage hedging.

The Arizona economists, however, suggest there are ways to estimate the outcome of a hedge, even when the conditions for hedging are less than ideal. Their statistical formula has direct application to cattle feeders selling in Phoenix. But the principal would work elsewhere as well.

First, this hypothetical example, albeit oversimplified, of the ideal hedging operation—

On January 1 an Arizona cattle feeder buys 40 feeder steers weighing 600 pounds and costing $30 a hundred weight. He intends to sell these in early June at a weight of 1,000 pounds (expected gain of 2.5 pounds per day) for $300 a head.

Also in January he sells a futures contract to deliver 40, 1,000-pound steers in June again at a price of $30 per cwt. In June, rather than make delivery, he closes out the contract by offsetting it with a purchase of a June futures contract.

Theoretically, the arithmetic in an ideal hedging arrangement should work out like so under three different market conditions—no change in market prices between January and June; a price advance of $3 per cwt; and a price drop of $3:

No change in market—

Jan. 1	Purchase	600 lb. @ $30/cwt=$180/head	Sell 1 June futures contract
	Cost of gain	400 lb. @ $23 = 92	@ $30=$300/head
		$272	
June 1	Sell	1,000 lb. @ $30/cwt=$300	Buy 1 June futures contract @ $30=$300/head
		Profit=$ 28/head	Profit=$0/head
		Net profit $28+$0=$ 28/head	

Market increases $3—

Jan. 1	Purchase	600 lb. @ $30/cwt=$180/head	Sell 1 June futures contract
	Cost of gain	400 ib. @ $23 = 92	@ $30=$300/head
		$272	
June 1	Sell	1,000 lb. @ $33/cwt=$330/head	Buy 1 June futures contract @ $33=$330/head
		Profit=$ 58/head	Loss=$30/head
		Net profit $58—$30=$ 28/head	

Market drops $3—

Jan. 1	Purchase	600 lb. @ $30/cwt=$180/head	Sell 1 June futures contract
	Cost of gain	400 lb. @ $23 = 92	@ $30=$300/head
		$272	
June 1	Sell	1,000 lb. @ $27/cwt=$270/head	Buy 1 June futures contract @ $27=$270/head
		Loss=$ 2/head	Profit=$30/head
		Net profit $30—$2=$ 28/head	

At this point, however, about all the would-be hedger in Arizona knows for sure is the price he can get when selling the futures contract ($30).

He obviously needs other information pertinent to making the decision whether to hedge, namely, a way of estimating the difference between the Arizona cash price he will sell the cattle for and the price he might have to pay in buying back the futures contract.

As a guide to making this estimate, the economists worked up the following table showing the monthly differences—averaged out over several years—between Chicago futures prices and cash prices for choice fat cattle in Phoenix:

Month	*The Phoenix cash price above or below Chicago futures price for choice fed steers, cents per lb.*
January	—.21
February	—.80
March	—.50
April	—.31
May	—.03
June	.50
July	.75
August	—.20
September	—.45
October	—1.36
November	—1.05
December	—.53

Knowing in January the June futures price is $30, the hedger consults the table and adds 50 cents to arrive at an estimated effective cash price in Phoenix in June of $30.50. Now the cattle feeder can decide to go into the futures market or to wait for higher prices on the cash market. This decision, it goes without saying, should also take into account the individual producer's estimates of his production costs, along with his expectations of price trends on the cash market.

The researchers at Arizona University emphasize the $30.50 is only an estimated price and not an actual price.

Statistically, the probability is 68 percent that the actual price in Phoenix in any one month will fall within 70 cents of the estimated effective price (higher or lower), and 95 percent of the time within $1.40.

Put another way, 95 percent of the time the farmer would get between $29.10 and $31.90 cwt.

[*The par delivery point is currently Chicago—with an alternate par delivery point of Peoria, Ill. Other current delivery points are Omaha, Neb., and Kansas City, Mo.*

However, the par delivery point is being changed from Chicago because the Chicago Union Stockyards are closing.

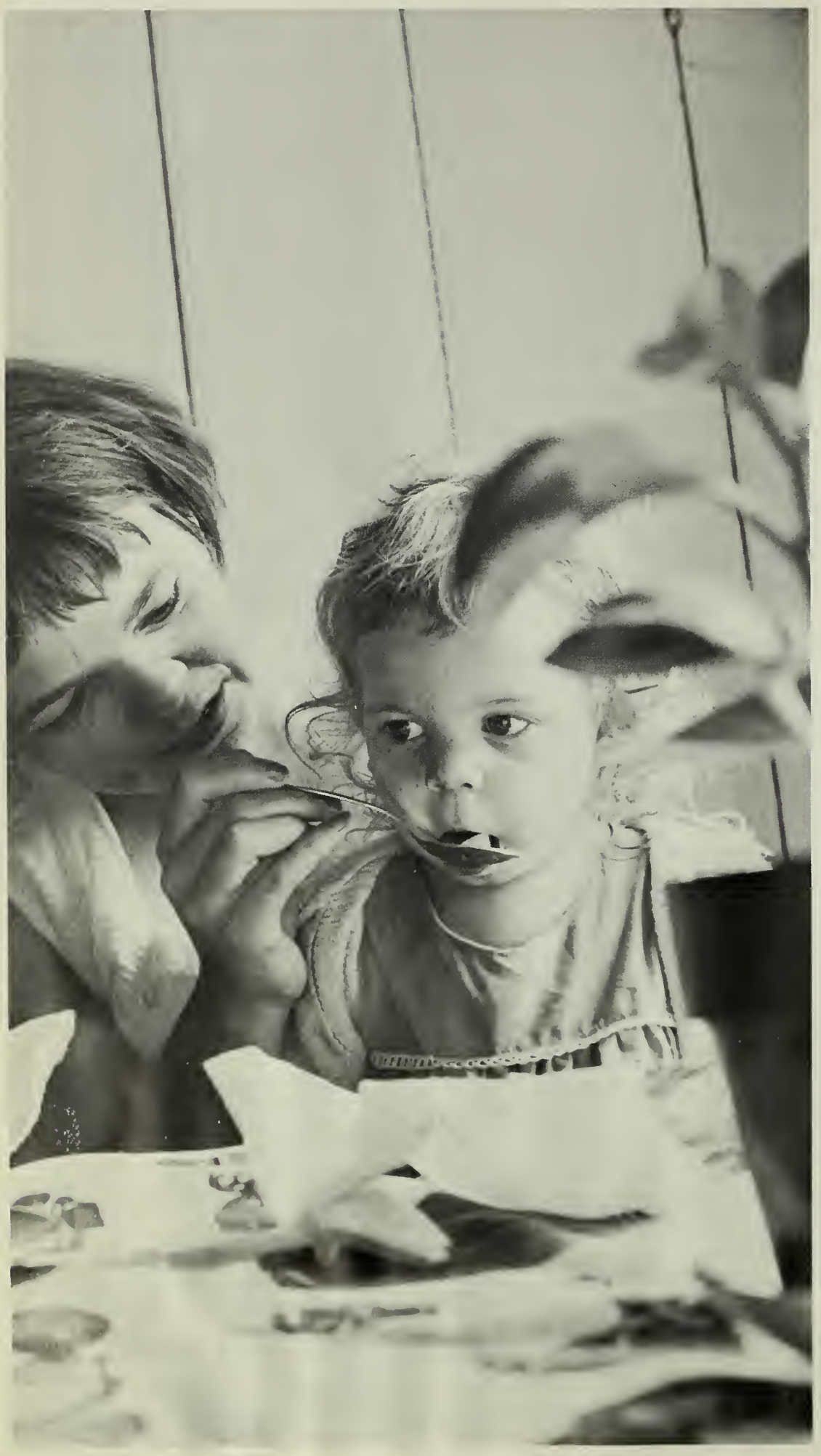
Marketing of cattle at Chicago is scheduled to cease February 1, 1971.

Beginning August 1, the new par delivery point will be Omaha.

The alternate non-par delivery points will be Peoria, Ill. and Guymon, Okla., along with Chicago.

This change in par delivery point is not expected to limit the effectiveness of hedging in cattle futures contracts. Historically, there has been a close correspondence among seasonal price patterns at the various markets across the country. (14)]

A Better Menu For 1 Million



Nutritional "teach-ins" on neighborly basis benefit low-income households

Teaching good eating habits to our Nation's poor families—particularly those who may not have access to mass media, can't read, or can't speak English—has long been a stumbling block for most conventional nutrition education projects. But the Cooperative Extension Service has made some headway.

In late 1968, the Extension Service launched its Expanded Food and Nutrition Education Program. The uniqueness of this program lies with the use of nonprofessional people—program aides—in the front lines of its task force.

The aides are usually local residents who understand the problems within a community, and can converse with the families in another language or local dialect if necessary. And they can inspire confidence and trust far more easily than professionals from the "outside."

The program aides are recruited, trained, and supervised by professional Extension home economists. Before going "into the field," the aides undergo 2 to 3 weeks of preliminary training, which includes lessons in nutrition, sanitation, budgeting, and food buying, handling, and storage.

After they begin teaching these same lessons in the homes of needy families, the aides receive continued instruction and counseling from their supervisors.

The Economic Research Service is also involved. It is analyzing the "teach-in" results to identify means of program improvement, and with a view to finding ways the food distribution system can better complement the program.

The scope of the Expanded Food and Nutrition Education Program (EFNEP) is impressive. Program

aides are currently assisting poor families in all 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands.

At mid-year 1970, well over 200,000 families were learning about better diets from over 7,000 program aides. Since the EFNEP's inception, more than 11,000 aides have been trained, and nearly 350,000 families —an estimated 1.7 million people— have participated in the project.

The aides haven't limited their efforts to program families alone. Well over 650,000 families who were not formally enrolled were contacted or received their help.

The EFNEP can also claim success in reaching the target population for which it was intended—hard to reach families in poverty, both rural and urban.

In March 1970, over three-fifths of the program families (average size —4.8 persons) had incomes under $3,000. During the 2 years of the project's existence, less than a tenth of the families have had incomes exceeding $5,000.

Along with their teaching duties, the aides keep records on each family they work with. The records provide background information on the family's resources and dietary habits. And they enable aides and supervisors to develop a plan of action most beneficial for each family.

"Food readings" are taken when the family homemakers enroll in the project and at 6-month intervals thereafter. They gauge the achievements of both the families and the aides as they progress in the program.

Initial food readings revealed that in a 24-hour "recall" period, only 9 percent of the enrolling homemakers ate the minimum required servings from each basic food group—meat, vegetables and fruit, dairy products and breads and cereals.

Moreover, about a third of the participants didn't use any milk products over the same period. And over 10 percent ate no vegetables or fruit.

Subsequent food readings confirmed that the "teach-ins" were yielding results. After a year, almost 20 percent of the homemakers still in the program said they were eating the minimum basic daily requirements.

And the proportion who reported eating one or more serving daily from each food group rose from over half to three-fourths.

The homemakers were asked, "What food and drink do you think people should have to keep healthy?" Upon entering the program, less than half named an item from each of the four basic food groups. After a year, however, 7 in 10 homemakers recognized that a balanced diet requires food from each basic category.

But the families aren't the only ones to gain from the Expanded Food and Nutrition Education Program. Many of the aides were themselves on welfare before joining the project. Some have been able to use their training and experience to obtain better paying jobs. And most all of them are planning better menus for their own families. (*15*)

Jackets Zip to Top Spot In Leather Clothing Survey

Will the man in the *real* leather jacket stand up, please, and tell us what he likes about it?

"Well—it wears real well, durable you might say. It's warm and water resistant. And it looks good—has a kind of style."

This is the answer that came up with most regularity in a recent survey among 1,100 Philadelphia men and women who were questioned about their attitudes toward clothing —other than shoes—made of real leather and suede.

Only one-third of the interviewees said they owned any real leather or suede clothing. And in 7 out of 10 of these cases, the specific item mentioned was a jacket. Coats or car coats ran a distant second.

Both men and women, whether they owned leather clothing or not, agreed that regular leather's main advantage lay in its durability. Although about 6 out of 10 perceived some disadvantages of leather for clothing, relatively few criticized it on any one point.

As for suede, appearance was cited as the main advantage. Most respondents had little trouble stating disadvantages of suede for use in clothing: cleaning problems were by far the most frequently mentioned.

If a washable suede came on the clothing market, about half of all the people in the survey said they would buy it. (*16*)

Processed Form Wins Over Fresh in Peach Squeeze

Dried peaches will be a rarity in the 1980 cupboard.

In their place, however, there will probably be new products now being developed. Among them: puree and clear peach concentrate, refrigerated peach slices, partially pasteurized peaches, and instant peach flakes (used in ice cream, cakes, dry mixes, and peach drinks).

This is all part of the trend envisioned for one of the nation's most popular fruits.

On a per person basis, we are now eating around 20 percent more processed peaches than fresh. The estimated per capita use in 1970 was about 7.5 pounds of processed versus a little over 6 pounds of fresh.

By 1980, however, our consumption of processed products is expected to be about double that of the fresh form—8.2 pounds per person versus 4.1 pounds.

Canned peaches will probably continue to be the consumers' favorite. A per capita rise from today's 5.8 pounds to about 6.4 pounds is projected.

In addition, consumption of peaches in canned fruit salad is expected to reach 1.3 pounds per capita in 1980, from 1.1 pounds in 1970.

Sharpest gain for processed items, however, is the 24-percent increase (.41 pound to .51 pound) projected for per capita use of frozen peaches at the end of this decade. (*17*)

Foreign Food For '71: Global View

The world's population increased to over 3½ billion in 1970.

The world's farmers kept pace by stepping up their production of food at about the same rate.

No large area of the world was afflicted with really bad weather in the 1970 crop year. *And, in contrast to some recent years, the rate of increase in 1970's farm production was greater in the less developed countries than in the industrialized nations.*

So all in all, the global food situation for '71 is not as gloomy as it has been in a number of earlier years.

Here's the ERS view of the picture and some national policies that figure strongly in the background.

Asian highlights. Weather in '70 was better than usual in the USSR and a belt across North China, Korea, and Japan. Russian farmers had record harvests of cotton and total grain. Fragmentary information from Communist China indicates good yields there.

Korea and Japan also enjoyed high yields per acre, but Japan's total farm output was reduced by a planned cutback in acreage of rice, the major crop.

Agricultural output continued upward in Pakistan, India, and some other less developed countries where climate, soils, irrigation facilities, and the marketing system made it feasible to grow high-yielding wheat and rice varieties.

Impact of new seed hybrids. In West Pakistan and Northwest India, the adaptation of the so-called Mexican varieties of wheat has been so successful that there have been some side effects to deal with. The rapid increase in the income of farmers growing the new varieties has created problems of equity in the distribution of benefits among land owners, farm laborers, and consumers. Similar problems have arisen in some places where high-yielding rice varieties have been adopted.

Unfortunately, most of the less developed countries cannot take advan-

tage of the new varieties.

The new wheats are prone to disease at high temperatures and humidities. So tropical countries cannot grow them successfully except at high altitudes.

Also, the soil and irrigation that high-yielding rice varieties demand are often lacking. In part, this is why many less developed countries show a declining trend in food production per capita.

Farm policy patterns. Boosting farm output for home use or export is the goal of all the less developed countries. Their government programs are usually implemented by support prices or subsidies—the same tools that industrialized countries use.

But the similarity generally stops there.

In the less developed countries, the need to meet nutritional requirements of the population is paramount. Thus, the success of farm policies is measured more by the output obtained than by the effect on farmers' incomes.

Most industrialized nations, on the other hand, can increase farm output faster than their population grows. Their food supplies—from imports and homegrown crops—are more than enough to provide their people with adequate diets. Their governments therefore are most concerned about markets, prices, and farm income. Subsidies may be used to reduce rather than to increase production.

Adjusting food abundances. The developed nations are continuing and strengthening their efforts in food supply management.

As a result of rigorous steps in 1970, the European Community has now reduced its surplus stocks of wheat, sugar, butter and dry skim milk. Subsidizing of EC exports and diversion of the surplus products to use as livestock feed were the main measures. The cost was $1.9 billion —$10 per community inhabitant.

To avert future milk and butter surpluses, the EC successfully encouraged elderly dairy farmers with small herds to retire. They were paid a subsidy of $200 per head for slaughtering about 290,000 cows.

Japan—top buyer of U.S. agricultural products—also made some farm policy switches last year that will have a '71 impact.

To combat rice surpluses, Japan encouraged a 10-percent cut in 1970 plantings by paying growers a subsidy to divert rice land to other crops or to fallow.

Programs for exports of rice on special terms have been expanded. Plans to use more rice for livestock feed will probably become effective this year. And for the long run, the Agricultural Land Law has been amended to encourage fewer but larger farms.

Biggest planned adjustments in farm production, however, have been

MORE MONEY, MORE MEAT. As people become richer they eat more meat and less starchy foods. And to produce more meat they use more grain as animal feed. The figures below show changes in several industrialized nations.

Increased production of meat by a country does not necessarily bring a corresponding rise in its per capita consumption. In some countries, such as Denmark, a sizable amount of meat is produced for export.

Country	Per capita use of grain for food		Consumption of meat per capita		Production of meat per capita		Per capita use of grain for animal feed	
	1955/56	1965/66	1955/56	1965/66	1955/56	1965/66	1955/56	1965/66
	Kilograms per year							
Austria	161.0	128.3	47.8	64.8	46.5	60.8	174.8	247.1
Belgium-Luxembourg	135.8	115.6	53.5	63.8	50.7	59.2	212.7	240.1
Canada	98.0	92.9	77.5	85.6	78.6	87.7	677.6	599.3
Denmark	107.1	89.4	59.7	64.1	170.4	238.1	818.6	1,124.8
France	138.6	120.6	68.9	87.0	68.8	83.7	214.2	276.0
Germany, West	121.4	94.0	50.4	66.6	46.4	54.9	158.0	188.3
Ireland [1]	164.7	145.3	53.9	66.0	145.9	187.8	229.5	301.9
Italy	181.4	180.6	20.8	36.8	18.6	27.2	73.9	178.0
Japan	182.2	166.2	4.0	11.2	3.9	10.3	14.8	61.5
Netherlands	118.8	92.6	44.3	55.3	56.6	77.3	105.9	272.4
Norway	122.2	92.3	40.9	41.7	43.2	40.9	159.3	190.5
Portugal	142.9	156.8	19.1	26.1	18.9	24.0	28.6	52.5
Spain [2]	149.7	137.5	14.2	26.4	14.2	23.5	113.1	148.3
Sweden	98.9	89.3	49.7	51.1	48.7	56.5	235.3	348.1
Switzerland	128.1	116.8	50.9	64.9	44.3	53.3	108.3	157.0
United Kingdom	115.4	112.0	63.4	70.1	34.9	47.4	171.4	237.1
United States	98.9	95.0	92.0	99.8	93.8	100.1	506.6	511.0
Average	**132.4**	**120.8**	**53.6**	**64.9**	**52.4**	**62.7**	**256.1**	**300.5**

[1] Figures refer to calendar years 1954 and 1964. [2] Figures refer to years ending June 1955 and 1964.

by wheat exporting countries.

U.S. wheat area was cut 10 percent from '69 to the lowest level since World War I. The harvest dropped 7 percent. In addition, there was an unplanned 10-percent reduction in the blight-stricken corn crop.

Canadian farmers were paid around $70 million (Canadian) to divert about half of their previous year's wheat plantings to pasture or fallow in 1970.

Australia sharply reduced its wheat marketing quotas for last year's crop. Though the action affected '70 incomes, the effect on area and production will show up this year. (*18*)

Fertilizer Plants Spring Up in South Asia

Fertilizer use in the countries of southern Asia more than tripled during the 1960's. And with the upswing, fertilizer plants have been springing up all across the vast area—from Afghanistan to the Philippines.

Though India's rate of fertilizer application is slowing, the rapid upward pace continues in most other South Asia countries. And despite the opening of new plants, overall demand for imports is expected to remain strong.

India itself now produces about half the fertilizer manufactured in southern Asia, and has about 50 factories including five large new plants. Elsewhere in South Asia:

In West Pakistan, new plants use natural gas byproducts for manufacture of nitrogenous fertilizer. Total fertilizer use doubled between 1966/67 and 1969/70, reaching about 338,000 tons. In East Pakistan the output of urea is increasing and imports of phosphates are rising.

Burma has two new plants now providing nitrogenous fertilizer for rice farmers.

Indonesia's factory near Palembang produces about one-third of the 120,000 tons of fertilizer it uses.

In the Philippines over half the 75,000 tons of nitrogenous and phosphate fertilizers distributed in 1970 was locally produced.

Ceylon imports all its chemical fertilizers, and imports have doubled since 1962. About 70 percent of Ceylon's rice is planted in the new hybrids that require heavy fertilization. The country has plans to produce urea from the byproducts of petroleum.

Most of South Asia's new plants only manufacture nitrogenous fertilizer. All of the potash and most of the phosphates used for preparing blended fertilizer were imported in the 1960's. India is now using deposits in Rajasthan to increase local output of phosphate fertilizers. (*20*)

New High Set for P.L. 480 Long-Term Credit Sales

U.S. agricultural exports sold on long-term credit under the P.L. 480 (Food for Peace) program reached $440 million in fiscal 1970, according to preliminary figures.

This would be an alltime high, 3 percent above the previous year. The credits, to be repaid in dollars or foreign currencies convertible to dollars, are for periods up to 40 years.

At the same time, the value of P.L. 480 commodities sold in exchange for local currencies dropped from $344 million in 1968/69 to an indicated $299 million.

Since the program began, in 1954, these currencies have been used principally as loans to finance projects of economic development in less developed countries. The LDC's would then be better able to import agricultural commodities on cash or credit terms.

In fiscal 1970, the total value of P.L. 480 exports—all types combined—came to about $980 million (preliminary). This was slightly below year-earlier levels. (*21*)

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NOTE: Unless otherwise indicated, authors are on the staff of the Economic Research Service (ERS) with their divisions designated as follows: Economic and Statistical Analysis Division (ESAD); Economic Development Division (EDD); Farm Production Economic Division (FPED); Foreign Development and Trade Division (FDTD); Foreign Regional Analysis Division (FRAD); Marketing Economic Division (MED); and Natural Resource Economics Division (NRED).

Economic Trends

Item	Unit or Base Period	'57-'59 Average	1969 Year	1969 Nov.	1970 Sept.	1970 Oct.	1970 Nov.
Prices:							
Prices received by farmers	1910-14 = 100	242	275	282	281	274	270
Crops	1910-14 = 100	223	220	221	235	229	231
Livestock and products	1910-14 = 100	258	323	334	320	313	304
Prices paid, interest, taxes and wage rates	1910-14 = 100	293	373	378	392	394	395
Family living items	1910-14 = 100	286	351	356	369	369	371
Production items	1910-14 = 100	262	304	306	317	319	319
Parity ratio		83	74	73	72	70	68
Wholesale prices, all commodities	1957-59 = 100	—	113.0	114.7	117.8	117.8	117.7
Industrial commodities	1957-59 = 100	—	112.7	114.2	117.4	118.3	118.3
Farm products	1957-59 = 100	—	108.5	111.1	111.8	107.5	106.7
Processed foods and feeds	1957-59 = 100	—	119.8	121.8	126.2	124.9	124.8
Consumer price index, all items	1957-59 = 100	—	127.7	130.5	136.6	137.4	137.8
Food	1957-59 = 100	—	125.5	128.1	133.3	133.0	132.4
Farm Food Market Basket: [1]							
Retail cost	Dollars	983	1,174	1,195	1,231	1,221	—
Farm value	Dollars	388	478	491	472	459	—
Farm-retail spread	Dollars	595	696	704	759	762	—
Farmers' share of retail cost	Percent	39	41	41	38	37	—
Farm Income: [2]							
Volume of farm marketings	1957-59 = 100	—	126	168	142	180	173
Cash receipts from farm marketings	Million dollars	32,247	47,229	5,085	4,562	5,607	5,200
Crops	Million dollars	13,766	18,790	2,651	2,052	2,856	2,900
Livestock and products	Million dollars	18,481	28,439	2,434	2,510	2,751	2,300
Realized gross income [3]	Billion dollars	—	54.6	—	56.5	—	—
Farm production expenses [3]	Billion dollars	—	38.4	—	40.8	—	—
Realized net income [3]	Billion dollars	—	16.2	—	15.7	—	—
Agricultural Trade:							
Agricultural exports	Million dollars	4,105	5,936	657.8	561.1	724.1	720
Agricultural imports	Million dollars	3,977	4,958	411.2	460.6	470.9	435
Land Values:							
Average value per acre	1967 = 100	—	[5] 179	[5] 179	[6] 186	[6] 186	[7] 118
Total value of farm real estate	Billion dollars	—	[5] 202.6	[5] 202.6	[6] 208.9	[6] 208.9	[7] 210.7
Gross National Product: [3]	Billion dollars	457.3	931.4	—	985.5	—	—
Consumption	Billion dollars	294.2	577.5	—	622.1	—	—
Investment	Billion dollars	68.0	139.8	—	138.3	—	—
Government expenditures	Billion dollars	92.4	212.2	—	221.0	—	—
Net exports	Billion dollars	2.7	1.9	—	4.2	—	—
Income and Spending: [4]							
Personal income, annual rate	Billion dollars	365.3	748.9	770.6	811.9	810.0	812.4
Total retail sales, monthly rate	Million dollars	17,105	29,303	29,471	30,885	30,484	—
Retail sales of food group, monthly rate	Million dollars	4,160	6,322	6,429	6,870	6,887	—
Employment and Wages: [4]							
Total civilian employment	Million	63.9	77.9	78.5	78.4	78.7	78.5
Agricultural	Million	5.7	3.6	3.4	3.4	3.3	3.3
Rate of unemployment	Percent	5.5	3.5	3.5	5.5	5.6	5.8
Workweek in manufacturing	Hours	39.8	40.6	40.5	39.3	39.4	39.5
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	3.19	3.26	3.42	3.38	3.39
Industrial Production: [4]	1957-59 = 100	—	173	171	166	162	161
Manufacturers' Shipments and Inventories: [4]							
Total shipments, monthly rate	Million dollars	28,745	54,726	55,888	56,475	54,957	—
Total inventories, book value end of month	Million dollars	51,549	95,931	95,474	98,658	99,229	—
Total new orders, monthly rate	Million dollars	28,365	54,933	55,912	55,523	54,369	—

[1] Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1959-61—estimated monthly. [2] Annual and quarterly data are on 50-State basis. [3] Annual rates seasonally adjusted third quarter. [4] Seasonally adjusted. [5] As of November 1, 1969. [6] As of March 1, 1969. [7] As of November 1, 1970.

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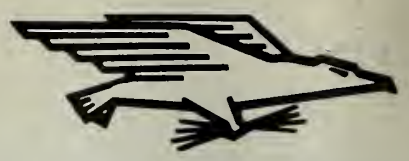

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